



**IMPEDIMENTS TO INFORMATION COMMUNICATION TECHNOLOGY (ICT) IN THE TEACHING AND LEARNING OF PHYSICAL AND HEALTH EDUCATION IN SECONDARY SCHOOLS IN ADO LOCAL GOVERNMENT EKITI STATE**

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**ABSTRACT**

*The researchers observed that many secondary schools in the study area do not have available ICT materials to teach physical and health education. Also it was observed that many of the students do not have access to the use of ICT, they are not stimulated toward learning of the subject and as such lack the necessary learning experiences they ought to have gained. This may be due to the non availability and poor access to ICT in the teaching and learning of the subject in most cases. Therefore, the study investigated impediments to Information and Communication Technology (ICT) in the teaching and learning of physical and health education in secondary schools in Ado Local Government Area of Ekiti State. The researchers used survey design of the descriptive type of research for the study. The research instrument used for this study was a self-structured close ended questionnaire designed by the researchers. The sample size of three hundred and fifty (350) respondents was used for the study. Simple random sampling technique was used to select the respondents used for the study. The face and content validity of the instrument was ensured by given draft copies to experts for vetting. The reliability of the instrument was ensured by using the split half method and a coefficient of 0.98 was obtained. Inferential statistics of Chi-square ( $\chi^2$ ) was used to test the hypotheses postulated at 0.05 level of significance. From the findings of the study, the researchers concluded that ICT influence teaching of physical and health education. That students' access rate to ICT influence their understanding of physical and health education. The researchers recommended that School administrators should compel the teachers to use ICT materials while teaching. In order to improve the effectiveness of teaching. Also, students should be given opportunity to have easy and frequent access to the ICT devices, in order to enhance their understanding and to enrich the students' knowledge of information received while learning.*

**Key words: Technology, Communication, Education and Skype**

## INTRODUCTION

Today, the limitations of distance have been broken by technology. A teacher can have several students all over the world through virtual classrooms. With the use of phones, Skype and other devices alike the teachers and students can easily get connected making it possible for teaching and learning to take different innovative platforms. It is seemingly difficult, if not impossible, to address quality education without making mention of the use of Information Communication Technology (ICT). ICT is considered as one of the pillars upon which quality education for all can indeed become a reality, because of its unique capacity to bring the world together even the most remote and disadvantaged of communities (Ndongfack, 2010). ICT as defined by Bamidele (2006) is a scientific method of storing and processing information and correspondingly sharing, exchanging and sending or moving such information from one place to another. He further defined them to mean computers, ancillary equipment, software, hardware, other services and resources interconnected together to form networks that is used in the automatic acquisition, storage, manipulation, managements, movement, control, display, switching, interchange, transmission or reception of data or information. Aribisala (2006) described information and communication technology (ICT) as generally regarded as the super highway through which information is transmitted and shared by people all over the world. ICT refers to technologies that provide access information through communication. ICT is an umbrella term that includes any communication device, encompassing radio, television, cell phones, computer and network hardware, satellite system and so on, as well as the various service and appliance with them such as video conference and distance learning (Khan et al., 2015). Library and Information Science (LIS) (2016) opined that ICT is a diverse set of technological tools and resources used to communicate and to create, disseminate, store and manage information.

Udo (2010) observed that the application of ICT in school subject is to make learners learn better and teachers to teach well, it is not hindrance to teacher student relationship. It rather ensures transactional instructional communication where the teacher manages the human materials, time and

space to make sure that instructional events (games, attention stimulation recall, present stimulus thinking to elicit performance provide feedback, provide generalizing experience, assess performance) occur leading to change in behaviour of students. The inherent cross curricular nature of ICT made it as a medium that can be used not only during information technology lessons but also in other subjects. ICT can be an excellent medium for training young people in learning and appreciating importance of physical and health education. ICT are electronic technologies used for information storage and retrieval. Development is partly determined by the ability to establish, a synergistic interaction between technology innovation and human values. The rapid rate at which ICTs have evolved since the mid -20<sup>th</sup> century, the convergence and pervasiveness of ICTs, give them a strong role in development and globalisation.

ICT is now making a change technologically in the world and virtually converting the world into a global village, where countries in the world are at different stages of integrating ICT into everyday practice of its citizen, including teaching and learning process, politics, industry, economy and others. It has been suggested that the ICT can play a number of roles in education such as developing the kind of graduates and citizens required in an information society, improving the quality of teaching and learning of physical and health education. Despite the fact that computers and internet facilities are now in place in many owned state and private schools. It is envisaged that educationists will see ICT as a major teaching and learning device across all educational institutions. In today's world, ICT can increase school efficiency and reduce unnecessary bureaucracy in school administration, the secondary school head can discharge his/her duties by using computers and internet in solving school general problems and in carrying out his/her day- to -day assignment especially as it relates to having a reliable information system in laptop computer. ICT can play a major part in diminishing the work load of the school administrator and his/her staff especially in keeping daily records and marking students' scripts and recording results through this, much time is saved and utilised in other directions for effective school administration.

The use of ICT in the teaching of physical and health education should be seen as a necessity as it will help to broaden the horizon of students. Thereby making them to be better informed and prepared for

better job opportunities in a diversified world. Meryem (2015) asserted that the use of ICT is indispensable in classrooms, as it is the key to ensure quality in our educational system and to open new horizons to students for better job opportunities in this globalised world. The use of ICT in teaching physical and health education can also be a tool that makes teaching more effective in the classroom and ensures easy delivery to the students. It is expected that by using ICT in teaching, teachers can enhance their competency and effectiveness in classroom teaching (Ertmer & Ottenbreit-Leftwich 2010). Also it would create an avenue for the teachers of physical and health education in secondary schools to develop and improve their skills in the use of ICT for teaching. The students will be able to learn fast and better therefore helping them to compete with students from technologically advanced countries. Teachers educator have to recognize and set up classroom settings for assignment in a way so that ICT tools must be integral part of teaching methodology (Kalogiannakis, 2010). Skinner (2010) revealed that ICT in education has reshaped the conventional teaching approaches and provided innovative methods in teaching process. Use of ICT is increasing day by day to achieve educational objectives and its application have great influence in teaching which makes teachers education delivery system easier and effective in physical and health education (Essay, 2018).

The use of ICT in teaching and learning increases students' understanding of concepts, learning of skills and encourages transfer of knowledge. This implies that ICT in teaching physical and health education should be flexible for the learner, so as to be able to have more knowledge and understanding of the subject matter. Integration of ICT in teaching has very important significance on learning attitude of students, creativity, knowledge construction, learning environment, teaching strategies, problem solving skills and understanding concept using various tool (Essay, 2018). It is expected that for learning to be more effective by using ICT in physical and health education class, the technological tools should be accessible for the learners in order to have better understanding of the subject. Noor-UI-Amin (2013) stated that ICTs increase the flexibility of delivery of education so that learners can access knowledge anytime and anywhere. It can influence the way students are taught and how they learn as now the

process are learner driven and not by teacher. Strambi and Bouvet (2003) stated that ICT provides flexibility of material and learning tool as well as an abundance pool of information. As a result, learners are offered with different learning styles and learning environments that could promote interactivity, and more exposure to authentic materials. ICT provides variety in the presentation of content which help the learners in concentration, better understanding and long retention of information. The learner can get opportunity to work on any live project with learners and experts from other countries (Vhanabatte & Kamble, 2014). Other ICT materials in physical health education also need to be at the learners door step in order to be able to use it whenever they are doing self practice so as to promote their learning ability. ICT materials such as videos, televisions, multimedia and computer software which combine text, sound, and colorful moving images can be used to provide challenging and authentic content that will engage the students in the learning process (Akude & Ajuzie, 2011).

According to Cabero (2001), the flexibilisation time-space accounted for by the integration of ICT into teaching and learning processes contributes to increase the interaction and reception of information. Such possibilities suggest changes in the communication models and the teaching and learning methods used by teachers, giving way to new scenarios which favour both individual and collaborative learning” in physical and health education. The use of ICT in educational settings, by itself acts as a catalyst for change in this domain. ICTs by their very nature are tools that encourage and support independent learning. It’s role in information handling, packaging, storing, retrieval and dissemination is at the root of any meaningful academic enterprise all over the world. Owolabi and Agboola (2010) asserted that ICT has transformed the conduct of research and teaching in academic institutions (secondary schools) by providing teachers and students (human resource capital) a wide range of opportunities for accessing accurate, relevant and timely information as well as providing medium for communication of their findings to wider audience, thus affecting their academic productivity and performances. The researchers observed that in most secondary schools in Ado Ekiti where Physical and Health Education is taught. Many of the schools don’t have available ICT materials to teach the students. Also it was observed that many of the students don’t have access to the use of ICT, they are not

stimulated toward learning of the subject and as such lack the necessary learning experiences they ought to have gained. This may be due to the non availability and poor access to ICT in the teaching and learning of the subject in most cases. In the opinion of the researchers learning capability of the students may be hampered. Thereby reducing the quality of education, ICT skills and experience acquired by the learners. These may stand as stumbling block to the educational progress of the learners in the future when they get to higher institutions of learning. As most higher institutions of learning are drifting towards online teaching. Therefore the main thrust of the study was to investigate the impediments to ICT in the teaching and learning of physical and health education in secondary schools in Ado local government area of Ekiti state.

### **RESEARCH OBJECTIVES**

The objectives of the study are to:

1. to investigate the influence of availability of ICT on teaching of Physical and health education in secondary schools in Ado Local Government Area of Ekiti State.
2. to determine the influence of students' access rate to ICT on understanding of PHE in secondary schools in Ado Local Government Area of Ekiti State.

### **RESEARCH HYPOTHESES**

The following hypotheses were tested at 0.05 level of significance.

1. There is no significant influence of availability of ICT on teaching of Physical and health education in secondary schools in Ado local government area of Ekiti state.
2. There is no significant influence of students' access rate to ICT on understanding PHE in secondary schools in Ado Local Government Area of Ekiti State.

### **METHODOLOGY**

The researchers used survey design of the descriptive type of research for the study. The area of the study was Ado local government area of Ekiti State. All public secondary school students in Ado form the population of the study. The population of the students was 3, 225 (Source: Ekiti State Ministry

of Education, 2018). It was from this population that the number of respondents needed for the study was selected. The sample size of three hundred and fifty (350) respondents was used for the study. There are fourteen (14) public secondary schools in Ado local government area of Ekiti State. A simple random sampling technique was used to select five (5) secondary schools out of the fourteen (14) secondary schools in the local government. Then seventy respondents were randomly selected from each of the selected secondary schools. The selection cut cross both boys and girls from J.S.S 1 to 3.

The research instrument used for this study was a self-structured close ended questionnaire designed by the researchers. The questionnaire was designed in line with the research variables. Five items were generated for each of the variables. The questionnaire was of Yes or No format. In order to validate the instrument for this study, drafts of the questionnaire prepared by the researchers were given to two (2) experts for face and content validity.

Reliability of the instrument was ascertained using split half method. The researchers administered the instrument to thirty five (35) respondents who were not from the schools that were selected for the study. Pearson's Product Moment Correlation (PPMC) and Spearman Brown's Formula were used to analyse the reliability and coefficient of 0.98 was obtained. The completed questionnaire were gathered and analysed by using inferential statistics of Chi-square ( $\chi^2$ ) to test the hypotheses at 0.05 level of significance.

## **RESULTS AND DISCUSSION**

### **Results**

**Hypothesis 1:** There is no significant influence of availability of ICT on teaching of Physical and health education in secondary schools in Ado local government area of Ekiti state.

**Table 1: Chi- Square Analysis of influence of availability of ICT on teaching of physical health Education**

S/N	Items	Yes	No	$x^2$ -cal	$x^2$ -tab	Df	Remark
1.	Are teachers are exposed to the use of ICT in teaching PHE?	291 280.6	59 69.4	658.95	9.49	4	*S
2.	Are there enough ICT materials to teach the students PHE?	254 280.6	96 69.4				
3.	Are your teachers knowledgeable in the use of ICT for teaching of PHE?	279 280.6	71 69.4				
4.	Do your teachers have skills ICT for teaching PHE?	268 280.6	82 69.4				
5.	Does the utilisation of ICT make teaching more concrete?	311 280.6	39 69.4				
<b>Total</b>		<b>1403</b>	<b>347</b>				

**P < 0.05**

Table 1 above shows that Chi-square analysis calculated ( $x^2$  cal) value was 658.95, the chi square critical value ( $x^2$  cri) was 9.49 with the degree of freedom (df) 4 at 0.05 level of significance. Since the  $x^2$  calculated value was greater than  $x^2$  critical value. This indicated that the hypothesis was rejected. This implies that availability of ICT influence teaching of physical and health education in secondary schools in Ado local government area of Ekiti state.

**Hypothesis 2:** There is no significant influence of students' access rate to ICT on understanding PHE in secondary schools in Ado Local Government Area of Ekiti State.



**Table 2: Chi- Square Analysis on influence of students’ access rate to ICT on understanding PHE**

S/N	Items	Yes	No	$\chi^2$ -cal	$\chi^2$ -tab	Df	Remark
1.	Do teachers have access to ICT for teaching?	284 281.4	66 68.6	665.05	9.49	4	*S
2.	Does the use of ICT help students to comprehend better?	265 281.4	85 68.6				
3.	Does ICT usage help students to assimilate easily?	258 281.4	92 68.6				
4.	Does enable better retention in students?	306 281.4	44 68.6				
5.	Do students have access to the use of ICT for learning?	294 281.4	56 68.6				
<b>Total</b>		<b>1407</b>	<b>343</b>				

**P < 0.05**

Table 2 above shows that Chi-square analysis calculated ( $\chi^2 cal$ ) value was 665.05, the chi square critical value ( $\chi^2 cri$ ) was 9.49 with the degree of freedom (df) 4 at 0.05 level of significance. Since the  $\chi^2$  calculated value was greater than  $\chi^2$  critical value. The hypothesis was rejected. This implies that students’ access rate to ICT influence their understanding of physical and health education in secondary schools in Ado Local government area of Ekiti State.

### Discussion

Hypotheses 1 which stated that there is no significant influence of availability of ICT on teaching of Physical and health education in secondary schools in Ado Local Government area of Ekiti State was rejected. This implies that availability of ICT influence teaching of physical and health education in secondary schools in Ado local government area of Ekiti state. The finding corroborated the assertion of Essay (2018) who asserted that use of ICT is increasing day by day to achieve educational objectives and its application have great influence in teaching which makes teachers education delivery system easier and effective in physical and health education. The use of ICT in teaching physical and health education will make great impact in the life of the students and making teaching relevant to students. The finding was also in line with the opinion of Meryem (2015) who opined that use of ICT is indispensable in classrooms, as it is the key to ensure quality in our educational system and to open new horizons to

students for better job opportunities in this globalised world. ICT materials are sensitive tools used in teaching and as avenues for students cooperation; these are planned educational materials that appeal to the senses of the students and quickens perfect teaching in the classroom. Teacher education have to recognize and set up classroom settings for assignment in a way so that ICT tools must be integral part of teaching methodology (Kalogiannakis, 2010).

Hypotheses 2 which stated that there is no significant influence of students' access rate to ICT on understanding physical and health education in secondary schools in Ado Local Government Area of Ekiti State was rejected. This implies that students' access rate to ICT influence their understanding of physical and health education in secondary schools in Ado Local government area of Ekiti State. The finding commemorate the assertion of Noor-Ul-Amin (2013) who stated that ICTs increase the flexibility of delivery of education so that learners can access knowledge anytime and anywhere. It can influence the way students are taught and how they learn as now the process are learner driven and not by teacher. The learner need to have access to ICT materials, so as to be able to trigger their learning ability and improve their understanding. The finding was in line with Essay (2018) who asserted that Integration of ICT in teaching has very important significance on learning attitude of students, creativity, knowledge construction, learning environment, teaching strategies, problem solving skills and understanding concept using various tools. It is believed that the effective integration of ICT in the educational system depends to a great extent on the accessibility, ability and the state of mind of learners toward the use of the cutting edge innovation in instruction and learning. ICT provides variety in the presentation of content which help the learners in concentration, better understanding and long retention of information. The learner can get opportunity to work on any live project with learners and experts from other countries (Vhanabatte & Kamble, 2014).

## CONCLUSION

Based on the findings of the study, the following conclusions were drawn by the researchers: that ICT influence teaching of physical and health education in secondary schools in Ado local government area of Ekiti state. That students' access rate to ICT influence their understanding of physical and health education in secondary schools in Ado Local government area of Ekiti State. Therefore, the researchers are of the opinion that School administrators should compel the teachers to use ICT materials while teaching. In order to improve the effectiveness of teaching. Also, students should be given opportunity to have easy and frequent access to the ICT devices, in order to enhance their understanding and to enrich the students' knowledge of information received while learning.

## REFERENCES

- Akude, I., & Ajuzie, N. (2011). Undergraduate economics students' accessibility to, and utilization of internet facilities in Alvanluku Federal College of Education, Owerri. *Journal of Education Media & Technology, 15(1)*, 47-56.
- Aribisala, J.O. (2006) Information Communication Technology (ICT) and Computer Applications. Ado Ekiti. University of Ado Ekiti Press.
- Bamidele, S. O. (2006). Development of modern ICT and internet system. In Agagu A.A. (ed). *Information and communication technology and computer applications. Abuja; pamofree, 1-3.*
- Cabero, J. (2001). Tecnología educativa. Diseño y producción de medios en la enseñanza. Barcelona, Paidó.
- Ertmer, P., & Ottenbreit-Leftwich, A. (2010). Teacher technology change: How knowledge, beliefs and culture intersect. *Journal of Research on Technology in Education, 42*, 255-284.  
Doi:10.1080/15391523.2010.10782551.
- Essay, UK. (2018). Significance of ICTs in teaching learning process education.  
<https://www.ukessays.com/essay/significance-of-ICTs-in-teaching-learning>
- Kalogiannakis, M. (2010). Training with ICT for ICT from the trainee's perspective. A local ICT teacher training experience. *Educational Information Technology, 15*, 3-17.  
Doi: 10.1007/510639-008-9079-3.
- Khan, MS., Khan, L., Din, S., Ismail, HM., & Rafid, K. (2015). The impacts of ICT on the students'

- performance: A review of Access to information. *Resources Human Social Science*, 1, 2224-5766.
- Library & Information Science (2016). ICT concepts and definition. [www.lisbdnet.com/ict-concepts-and-meaning-definition/](http://www.lisbdnet.com/ict-concepts-and-meaning-definition/)
- Meryem L. (2015). The use of ICT in teaching. Morocco Worldnew.
- Ndongfack, M. (2010). Teacher Profession Development on Technology Integration Using the Mastery of Active and Shared Learning for Techno-Pedagogy (MASLEPT) Model. *Creative Education*, 6, 295-308. <http://dx.doi.org/10.4236/ce.2010.63028>.
- Noor-UI-Amin, S. (2013). An effective use of ICT for education and learning by drawing on worldwide knowledge, research and experience: ICT as a change agent for education. *Scholarly Journal of Education*, 2, 33–45.
- Owolabo, K. A., & Agboola, I. O. (2010). Availability and use of Internet by academic staff in Nigerian Agricultural Universities: A case study of University of Agriculture, Abeokuta, Nigeria. *Annual Journal Information Communication Technology*, 7, 1.
- Skinner, D. (2010). *Effective teaching and learning in practice*. Bloomsbury Academic.
- Strambi, A., & Bouvet, E. (2003). Flexibility and Interaction at a Distance : A Mixed Mode Environment for Language Learning. *Language Learning & Technology*, 7(3), 81-102.
- Vhanabatte, R. B., & Kamble, C. Y. (2014). Importance of ICT in teaching. [www.researchfront.in](http://www.researchfront.in)